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August 10, 2026

VIA EMAIL & HAND DELIVERY:

Mr. Daniel Cummings
Assistant City Manager for Economic and Project
Development City of Marietta
205 Lawrence Street
Marietta, GA 30060

Re: Request for Approval of Proposed Rezoning and Stipulations for The Edge - 1155 Powers Ferry Place

Dear Mr. Cummings:

Prime Storage Powers Ferry Place Marietta, LLC ("Prime") submits this noise study. The study shows that with the proposed mitigation measures, the adjacent residential neighbors will have a reduction in noise from the current existing conditions because the mitigation measures will reduce the existing interstate noise. The applicant will certainly stipulate to the equipment and mitigation measures detailed in the report.

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Sincerely,

SAMS, LARKIN & HUFF, LLP

Parks F. Huff
phuff@samslarkinhuff.com

PFH/jac
Enclosure

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GA10
Sound Study Report

Submitted by:

Bowman Consulting Incorporated
179 River Street
Troy, NY 12180

Submitted to:

Prime Group Holdings, LLC

August 2026

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1.0 Introduction

1.1 Background

Prime Group Holdings LLC (the Client) has applied to rezone the property at 1155 Powers Ferry Place, Marietta, Georgia 30067 (Project) to permit development of a data center facility (City of Marietta zoning case Z-2026-12). Bowman Consulting Group, Ltd. (Bowman) was retained to perform a study of the site's predicted sound impact in support of the rezoning application.

This report documents: an ambient sound survey characterizing the existing acoustical environment; acoustical characterization of the sound-producing mechanical equipment proposed for the facility; three-dimensional sound propagation modeling of facility operation, including the proposed noise mitigation design; and comparison of predicted sound levels within the neighboring residential zone against the applicable City of Marietta noise limits.

1.2 Site Description

The Project site is an approximately 10.7-acre property at 1155 Powers Ferry Place within the corporate limits of the City of Marietta, Cobb County, Georgia, currently operating as a storage facility. The site sits just below the adjacent highway (I-75) and slopes gently from the southwest toward the northeast, and in places it rests on a slight rise above the neighboring residential area. The site is bounded by residential developments to the north and east, and by the highway and commercial uses to the south and west. The nearest noise-sensitive receptors are the residential properties along the northern and eastern boundaries. The site is under City of Marietta jurisdiction, and the City's noise regulations (Chapter 10-6 of the Code of Ordinances) therefore govern this assessment.

2.0 Applicable Noise Standards

The governing standard is Chapter 10-6 (Noise) of the City of Marietta Code of Ordinances (codified through Ordinance No. 8506, March 11, 2026, Supplement No. 55; Chapter 10-6 amended through Ordinance No. 8278, June 8, 2022). Section 10-6-030, Table 1 of the code establishes maximum permissible sound levels by receiving property category in both A-weighted and C-weighted decibels, measured at or within the real property line of the receiving property with the sound level meter set to slow response. For the residential category the limits are 65 dBA / 84 dBC during daytime hours (7:00 a.m.–11:00 p.m.), and 60 dBA / 79 dBC during nighttime hours (11:00 p.m.–7:00 a.m.). Commercial receiving property carries identical limits; industrial receiving property is subject to 70 dBA / 89 dBC at all times. The limits are summarized in Table 1 below. This assessment is made against the residential category which is the receiving use adjacent to the site's northern and eastern boundaries.

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Table 1 Applicable Sound Level Limits (Marietta Code Sec. 10-6-030, Table 1)

Receiving property category	Period	Limit (dBA)	Limit (dBC)
Residential, public space, institutional, or noise-sensitive facility	Daytime (7:00 a.m.–11:00 p.m.)	65	84
Residential, public space, institutional, or noise-sensitive facility	Nighttime (11:00 p.m.–7:00 a.m.)	60	79
Commercial or business	Daytime / Nighttime	65 / 60	84 / 79
Industrial or manufacturing	At all times	70	89

Section 10-6-040(B) of the code exempts "emergency work" from the sound level limits; generator operation during an actual loss of utility power falls within this exemption. Routine exercising and load testing is not emergency work and is therefore assessed against the Table 1 limits; the generator testing scenario evaluated in Section 7.0 addresses this condition.

3.0 Ambient Sound Level Monitoring

3.1 Survey Overview

A long-term unattended ambient sound survey was conducted July 7–9, 2026 at two monitoring positions on the site (Figure 1). The first monitoring position ML-1 was located in the northeast corner of the site, the on-site location farthest from the highway, adjacent to the northern/eastern residential boundary. The second monitoring position ML-2 was located near the western property boundary near the highway. ML-1 is representative of the acoustical environment at the residential interface where the Table 1 limits apply. ML-2 recorded higher sound pressure levels reflecting its proximity to highway traffic.

Measurements at both locations were made with calibrated Larson Davis SoundAdvisor Model 831C sound level meters (IEC 61672-1 Class 1) with PRM831 preamplifiers, logging A-weighted 1-second Leq records. The meter at position ML-1 ran continuously from 22:09:54 on July 7th until 23:01:30 July 9th, 48 hours and 51 minutes. The meter at position ML-2 ran continuously from 21:24:53 on July 7th until 23:34:34 on July 9th, 50 hours and 9 minutes. During the monitored period from 3:00 p.m. until 5:00 p.m. on July 9th, thunderstorms were reported in the vicinity of the site; because this interval reflects transient meteorological noise that is not representative of the ambient acoustical environment, it has been excluded from the dataset for both monitoring locations.

3.2 Results

One-second LAeq records were grouped according to the Marietta Table 1 daytime (7:00 a.m.–11:00 p.m.) and nighttime (11:00 p.m.–7:00 a.m.) periods. The LAeq values presented are energy averages (logarithmic) of the 1-second records; the LA90 values presented are the 10th percentile of the 1-second LAeq measurements within each period (level exceeded 90% of the time). Results are shown in Table 2 below.

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Table 2 Measured Ambient Sound Levels by Marietta Code Daytime and Nighttime Periods

Monitoring Location	Daytime (07:00 – 23:00)		Nighttime (23:00-07:00)	
	LAeq (dBA)	LA90 (dBA)	LAeq (dBA)	LA90 (dBA)
ML-1	56	52	55	51
ML-2	64	59	62	56

4.0 Project Description

The project redevelops the site for data center use. It comprises one two-story building housing the data center infrastructure in the northwest portion of the site; an equipment yard along the southern face of that building containing the cooling and standby-power equipment; and a group of seven (7) existing single-story storage-unit buildings on the eastern side of the site, each of which remains in place. The sound-producing equipment is described in Section 4.1.

4.1 Equipment Sound Source Data

The sound-producing mechanical equipment modeled in this study comprises: nine (9) YORK model YVAA0456 air-cooled chillers located in the southeastern area of the equipment yard, operated as eight (8) duty units plus one (1) standby unit held in reserve against a unit failure (eight (8) units operate concurrently in all assessment scenarios) each fitted with a fan-discharge silencer system (Section 6.0); nine (9) Cummins model 2500DQKAN diesel emergency generators (QSK60 engine, 2,500 kW standby each), each housed in a Level 3 sound-attenuated enclosure (GPC model GWE-G3-2500-3960), positioned along the southern face of the data center building; and nine (9) generator-associated 3,000 kVA transformers. The generators operate only during loss of utility power and periodic exercising/testing; testing is assumed to be staggered so that only one (1) generator is active at a time, and the modeling reflects that assumption.

The source levels included in the sound study's noise model were developed under a two-part approach. Where certified manufacturer data exist, they are used directly: the chiller base level comes from the unit's AHRI 370 sound rating, the generator derivation is built on the Cummins engine/generator data sheet (NAD-5919) and the enclosure manufacturer's performance guarantee, and the transformer level follows the NEMA TR 1 sound standard for its kVA class. Where the equipment providing attenuation has not yet been procured (the chiller discharge silencers and the generator enclosures), the attenuation carried in the model was developed from published performance of comparable commercially available systems and is stated in this report as a minimum performance requirement. The selected manufacturers shall confirm at procurement that supplied equipment meets or exceeds the modeled values in each octave band; Table 4 quantifies those requirements as the octave-band difference between the original manufacturer source levels and the modeled source levels of Table 3.

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The chiller input is the AHRI 370 sound rating from the YORK submittal: LwA 106 dBA per unit at 100% load, with the octave-band values reproduced in Table 4. AHRI 370 is the industry rating standard for this equipment class and reports certified, full-unit sound power in octave bands, and the 100%-load rating was carried for both the daytime and nighttime assessment periods as the conservative source condition. A modeled discharge-silencer insertion loss was subtracted from that spectrum: 2 dB at 63 Hz rising to a peak of 11 dB in the 1–2 kHz bands (Table 4), the characteristic shape of a dissipative attenuator. The result is 96.9 dBA per unit, a net reduction of ~9 dB that falls within the 6–12 dB range published for commercial chiller discharge attenuator systems. The Table 4 insertion loss values are the minimum performance requirement for the procured silencers.

The generator inputs are the Cummins bare-unit sound power data from data sheet NAD-5919: mechanical 124.6 dBA and open-exhaust 133.0 dBA (ISO 6798 basis), with transcribed values verified against the published totals within 0.7 dB, and the enclosure manufacturer's performance guarantee of 75 dBA at 7 m (energy average of eight positions, free field). No manufacturer octave-band data exists for the enclosed assembly, so the derivation of the sound power level spectrum is based on said sound performance guarantee which the manufacturer is required to meet,

The guaranteed sound pressure level was converted to sound power per ISO 3744 using a measurement surface at 7m from the enclosure. The octave-band shape was built from the mechanical and exhaust paths with frequency-dependent enclosure attenuation normalized to the guaranteed sound performance; the estimated attenuation of: 11 to 36 dB across the octave bands and 28 dB net (Table 4) is the minimum performance requirement, to be confirmed by the enclosure manufacturer together with the 75 dBA at 7 m guarantee.

The transformer input is based on the NEMA TR 1 audible sound level calculation, the industry-standard design-stage basis in the absence of unit-specific manufacturer data, for a 3,000 kVA transformer. One transformer operates with its associated generator in the testing scenario.

Modeled source elevations are 7.2 ft (2.2 m) for the generators and 3.6 ft (1.1 m) for the transformers, with each chiller modeled as a point source at the outlet plane atop the unit at 13.5 ft (4.1 m). The sound power levels as entered in CadnaA are summarized in Table 3.

Table 3 Source Sound Power Levels

Sound Source	Octave Band Frequency (Hz) Sound Power Level (dB re 1 p)									Total Sound Power Level	Height Above Grade
	31.5	63	125	250	500	1k	2k	4k	8k	dBA	(ft)
Chiller (silenced)	98.0	98.0	96.0	95.0	95.0	91.0	87.0	88.0	80.0	96.9	13.5
Emergency generator (enclosed)	118.1	123.0	115.1	107.2	101.8	95.1	89.8	91.5	94.0	105.5	7.2
Generator-associated transformer	75.3	81.3	83.3	78.3	78.3	72.3	67.3	62.3	55.3	78.7	3.6

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Table 4 states the minimum attenuation performance requirements: the difference, in each octave band, between the original manufacturer source levels and the modeled source levels of Table 3.

Table 4 Minimum Attenuation Performance Requirements

Sound Source	Octave Band Frequency (Hz) Sound Power Level (dB)									Overall
	31.5	63	125	250	500	1k	2k	4k	8k	
Chiller: original unit sound power (AHRI 370, 100% load) [a]	—	100.0	100.0	101.0	104.0	102.0	98.0	97.0	88.0	106.0 dBA
Chiller: modeled silenced sound power (Table 3)	98.0	98.0	96.0	95.0	95.0	91.0	87.0	88.0	80.0	96.9 dBA
Chiller: required minimum silencer insertion loss	— [a]	2	4	6	9	11	11	9	8	~9 (dB net)
Generator: original unhoused sound power (mechanical + open exhaust, energy-combined)	129.2	137.7	137.2	133.1	129.5	125.1	125.9	124.7	123.3	133.6 dBA
Generator: modeled enclosed sound power (Table 3)	118.1	123.0	115.1	107.2	101.8	95.1	89.8	91.5	94.0	105.5 dBA
Generator: required minimum enclosure / exhaust-silencer attenuation	11	15	22	26	28	30	36	33	29	~28 (dB net)

a. AHRI 370 sound rating data begin at the 63 Hz octave band. The modeled 31.5 Hz chiller band is a flat extension of the treated 63 Hz level; no silencer requirement is derived at 31.5 Hz.

5.0 Sound Propagation Model

Sound propagation modeling was performed in DataKustik CadnaA (version 2026), implementing ISO 9613-2:2024, an octave-band engineering calculation of outdoor sound transmission from source to receiver. Predicted levels represent facility-only contributions and do not include the existing ambient. Meteorological inputs are 20°C and 70% relative humidity for atmospheric absorption, with the meteorological correction C0 = 0 dB, which applies propagation-favorable (downwind or inversion) conditions concurrently along every source-to-receiver path, representing the conservative, worst-case configuration. Reflections are computed to second order, ground absorption is set to G = 0.1 (acoustically reflective, consistent with the site's predominantly concrete and paved surfaces), and the calculation grid is spaced at 0.5 m (1.6 ft) intervals in the x and y directions.

Site and surrounding terrain were developed from USGS elevation data and imported to CadnaA as height contours. Buildings within the site footprint are modeled as three-dimensional obstacles.

All sources are modeled as point sources. Each duty chiller is represented as a point source at the outlet elevation atop the unit. Eight duty chillers operate at 100% load in all scenarios, for both the daytime and nighttime assessment periods. Each generator is a point source at 7.2 ft (2.2 m), and each associated transformer is a point source at 3.6 ft (1.1 m). The testing scenario operates one (1) generator and its associated transformer at a time, per the staggered-testing assumption.

Rather than discrete receptor points, the assessment uses the calculation grid at a consistent height of 5-ft (1.5 m) above grade. Compliance is evaluated against the maximum predicted level within the residential zone beyond the site's northern and eastern property boundaries, and demonstration that the maximum grid value complies with the applicable limits establishes compliance at every location

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within the zone. Both A-weighted and C-weighted results are evaluated for the Table 1 daytime and nighttime periods.

6.0 Noise Mitigation Design

The modeled design incorporates four (4) mitigation elements, summarized in Table 5. Results in Section 7.0 and the compliance findings in Section 8.0 reflect the post-mitigation condition.

Table 5 Noise Mitigation Elements

Element	Description	Basis / status
Chiller discharge silencers	Fan-discharge silencer systems on each chiller. The octave-band insertion loss values used in the model (Section 4.1) constitute minimum performance requirements.	Performance specification; the selected silencer manufacturer shall confirm at procurement that supplied equipment meets or exceeds the modeled attenuation in each octave band.
Generator sound-attenuating enclosures	Level 3 sound-attenuating enclosures on each emergency generator (GPC model GWE-G3-2500-3960 basis), guaranteed at 75 dBA at 7 m. The octave-band attenuation applied in the model (Section 4.1) constitutes a minimum performance requirement.	Performance specification; the enclosure manufacturer shall confirm at procurement that the supplied enclosure and exhaust silencer system achieves both the guarantee and the modeled octave-band attenuation.
Equipment yard barrier (B-1)	20-ft-tall sound barrier enclosing the equipment yard. Height measured above site grade. Construction per the requirements below.	Modeled as an acoustically opaque, ground-connected screen.
Property boundary barrier (B-2)	10-ft-tall sound barrier along the northern and eastern property boundaries; barrier length to be coordinated as part of final design. Height measured above site grade. Construction per the requirements below.	Modeled as an acoustically opaque, ground-connected screen.

The barriers are modeled as acoustically opaque screens whose insertion loss is limited by diffraction over the top; the constructed barriers must therefore meet minimum performance standards for transmission loss through the panel material(s). Final material selection rests with the owner, and any wall system delivers the modeled performance provided that it is: fully continuous over its height and length, with no open joints, holes, or gaps and full contact at grade; built of material with sufficient transmission loss that the through-panel path is at least 10 dB below the diffracted path (typically achieved by a surface density on the order of 4 lb/ft^2 (20 kg/m^2) or greater); and constructed to the modeled heights above grade throughout the site. Systems meeting these requirements include concrete masonry, precast concrete panel, solid composite panel, and steel panel-and-post construction.

7.0 Results

Two operating scenarios were evaluated. Scenario 1 (normal operation) represents around-the-clock facility operation: eight (8) duty chillers at 100% load, with the standby chiller, generators, and transformers not operating; it is judged against the nighttime limits as the governing case. Scenario 2

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(generator testing) adds one (1) generator at rated load together with its associated transformer to the eight (8) operating chillers, per the staggered-testing assumption of one (1) unit being tested on the site at a time. For both scenarios, results are reported as the maximum predicted sound level beyond the property line within the residential zone (Table 6); modeled sound level contours are presented as Figures 2 and 3.

Table 6 Predicted Maximum Sound Levels Beyond the Property Line Within the Residential Zone (Post-Mitigation)

Scenario	Max predicted (dBA)	dBA limits (day / night)	Margin vs. night limit (dB)	Max predicted (dBC)	dBC limits (day / night)
Scenario 1: Normal operation (8 chillers)	47	65 / 60	13	57	84 / 79
Scenario 2: Generator testing (8 chillers + 1 generator + transformer)	49	65 / 60	11	68	84 / 79

Both scenarios comply with the nighttime limits, the most restrictive applicable criteria, so compliance does not depend on confining generator testing to any particular time of day.

8.0 Conclusions

With the noise mitigation design described in Section 6.0 consisting of: silenced chiller discharges and enclosed generators at the specified minimum attenuation performance, a 20-ft sound barrier enclosing the equipment yard, and a 10-ft sound barrier along the northern and eastern property boundaries; the maximum predicted facility sound levels beyond the property line within the residential zone are 47 dBA for normal operation and 49 dBA for the generator testing scenario. Both are below the most restrictive applicable criterion, the City of Marietta 60 dBA nighttime residential limit, by 13 dB and 11 dB respectively, and below the 65 dBA daytime limit by 18 dB and 16 dB. The completed C-weighted evaluations likewise fall below the 84/79 dBC limits. The facility contribution during normal operation with all the previously stated mitigation measures is below the measured existing nighttime ambient near the site's residential property line. The octave-band attenuation values assumed for the chiller silencers and generator enclosures constitute minimum performance requirements to be confirmed by the selected equipment manufacturers at procurement (Sections 4.1 and 6.0).

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9.0 References

International Organization for Standardization. (2024). Acoustics - Attenuation of sound during propagation outdoors (ISO Standard No. ISO 9613-2:2024). Retrieved from https://www.iso.org/standard/74047.html

Datakustik GmbH. CadnaA (sound propagation modeling software).

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Figure 1 – Ambient Monitoring Positions

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84°29'16.380"W
732500E
84°28'58.353"W
33°55'57.441"N
33°55'29.389"N

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Ambient Sound Monitoring Positions
Approximate Project Property Boundary

50 0 50 100 m

100 0 100 200 ft

Contour Interval = 5'
Horizontal Datum: NAD83 / UTM zone 16N
Vertical Datum: NAVD88

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GA10 - Ambient Monitoring Results (7/7 - 7/9)

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Figure 2 - Sound Propagation Model – Generator Testing (Daytime)

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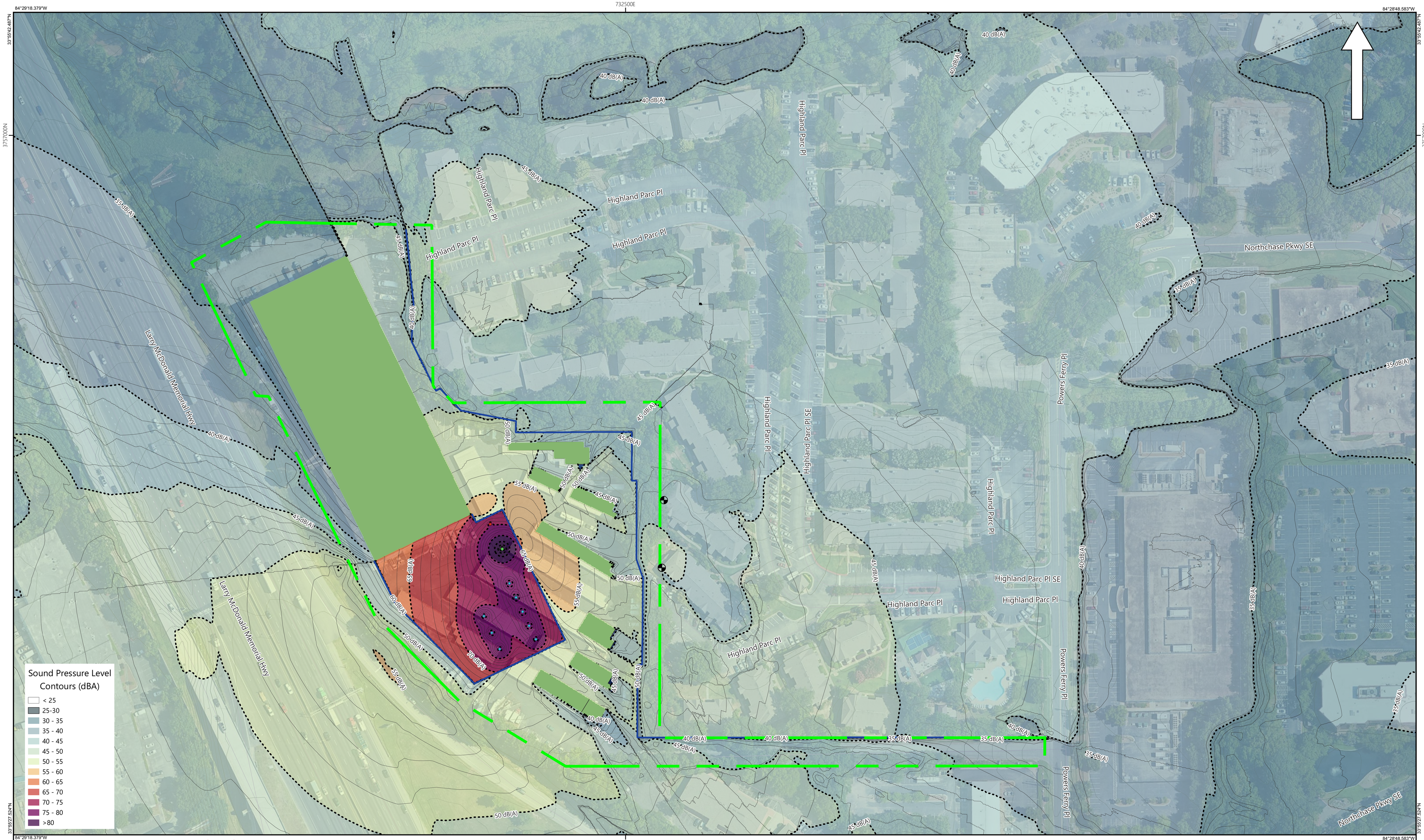
84°29'18.379"W 732500E 84°28'48.583"W

33°56'42.487"N 3752000N



33°55'27.524"N

84°29'18.379"W 732500E 84°28'48.583"W

Barrier Boundary
Receivers
Project Boundary
Noise Barriers
Project Buildings
Air-Cooled Chillers
Backup Generator
Ground Transformer

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100 0 100 200 m
250 0 250 500 ft

Contour Interval = 2'
Horizontal Datum: NAD83 / UTM zone 16N
Vertical Datum: NAVD88

Sound Propagation Map - Generator Testing Scenario

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FIGURE 2
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Figure 3 - Sound Propagation Model – Routine Operations (Nighttime)

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84°29'18.994"W
732500E
84°28'49.179"W
33°55'41.102"N
3757000N

33°55'26.130"N

Barrier Boundary
Receivers
Project Boundary
Noise Barriers
Project Buildings
Air-Cooled Chillers
Backup Generator
Ground Transformer

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100 0 100 200 m
250 0 250 500 ft

Contour Interval = 2'
Horizontal Datum: NAD83 / UTM zone 16N
Vertical Datum: NAVD88

Sound Propagation Map - Baseline Operation Scenario

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FIGURE 1
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